Press, Charlottesville, Virginia. x + 219 pp., 25 text figures, 7 tables. ISBN 0-8139-2242-9. Cloth, \$35.00.—Virginia is arguably the birthplace of ornithology in North America. Captain John Smith and naturalist Mark Catesby were among the early describers of Virginia's common birds. David Johnston's book, however, begins by taking the reader back to the Tertiary period, some 65 million years ago, with Storrs Olson's description of fossils from tidewater Virginia. John Guilday, studying bone deposits in mountain caves, identified 80 species of birds, including Rock Ptarmigan and Spruce Grouse, from a time when Virginia's climate differed greatly from that of today. Archaeological studies and accounts of aboriginals in the 17th century complete Chapter 1.

The next four chapters lead the reader through the evolution of ornithology during the 16th through 19th centuries. The earliest British, French, and Spanish explorers left no record of wildlife observed, so Thomas Hariot and John White at the Roanoke Island colony in 1585 were the first to describe and illustrate (White) the local birds and call them by their Algonquian names (appendix B). Starting in the Jamestown settlement in 1607, John Smith and others called the birds by their closest British equivalents. Readers will be fascinated by the accounts of early explorers and naturalists, including the many charming direct quotes from poorly known early naturalists: William Strachey, Rev. Alexander Whitaker, Ralph Hamor, Philip Bruce, Samuel Clarke, Nehemiah Grew, John Banister, and John Clayton. Exploration of the Commonwealth continued through the 18th century. By the 19th century, emphasis was on scientific collecting and preparation of state and local lists.

For the 20th century, the chapters are topical. Chapter 6 relates contributions by Smithsonian scientists and employees of the U.S. Bureau of Biological Survey and U.S. Fish and Wildlife Service. Most of the scientists mentioned lived in Virginia, and all made contributions to Virginia ornithology. Subsequent chapters focus on geography; conservation; "Artists-Naturalists and Presidents"; extirpated and non-native birds; falcons, eagles, and hawks; bird banders prior to 1960; and "The Twentieth Century and Beyond."

The final pages include some modern centers of bird study, principal ornithological

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The History of Ornithology in Virginia.— David W. Johnston. 2004. University of Virginia accomplishments of the 20th century, local and state bird lists, books on Virginia's avifauna, an epilogue, Algonquian names of birds, principal collectors of Virginia birds, cooperative observers who submitted bird observations to the Biological Survey–Fish and Wildlife Service from 1880 to 1970, a selection of nature writings pertaining to Virginia, references by chapter, and a brief index.

Appendix A is a list of common and scientific names of 311 birds mentioned in the text. With two more pages, Johnston could have given a complete list of Virginia's 435 birds as of the close of the 20th century. And it would have been of interest to many people to see when and by whom each species was first recorded in Virginia—information that his thorough specimen and bibliographic search would have revealed.

Johnston cleverly includes samples of bird art spanning historical time, starting with Virginia petroglyphs and including paintings by John White (ca. 1585), Simon Gribelin, Ulysses Aldrovandus (ca. 1599), Edward Topsell (1614), Mark Catesby (ca. 1731), Alexander Wilson (1808), John James Audubon (1843), Walter Weber, and Jackson Miles Abbott. The only map depicts historic Peregrine Falcon eyries (1907–1963).

This book was researched over a 10-year period, as is shown by a long list of acknowledgments to librarians, archivists, curators, ornithologists, and birders. It is well written and can serve as an example to other ornithological historians. I was surprised, however, to see May Thacher Cooke identified as a sister of Wells W. Cooke, given that May always referred to him as "father." Johnston considered a 1649 report of heath cocks (prairie-chickens) too far out of normal range to be credible. He apparently was unaware that this species persisted in Maryland into the 1860s.

The book's greatest failure is its index, which is poorly organized and very incomplete. Birds are indexed only by families, so to find a rail, one must look under cranes, rails, and allies. Many authors are listed under topical headings, but not under their own names. One finds Oberholser's name under "authors," but not under "O" or "ornithologists" or "collectors." Spencer F. Baird is indexed under "authors," "collectors," and "Smithsonian," but not under "Baird." The following prominent ornithologists are among

the many not indexed either under their name or among the authors or ornithologists: Paul Bartsch, William Brewster, John Buckalew, Thomas Burleigh, Roger Clapp, May and Wells Cooke, Ira Gabrielson, and Frederick Lincoln. Anyone researching individual persons would have to read a substantial part of the book to determine whether a particular person had been mentioned. And for those who are indexed, the page numbers are not necessarily complete.

A problem with literature searches is that a Virginia search may not reveal titles that are in a national or regional category, such as the District of Columbia or the Del-Mar-Va Peninsula. Thus, Buckalew's 1950 note in *The Auk* that details the first North American record of *Larus fuscus* was missed. The specimen he collected in Maryland had first been identified on the Virginia side of the state line.

The first cooperative bird-migration count in North America should have been mentioned. It was organized by Harry Oberholser on 12 May 1913. The Virginia participants read like a Who's Who in Ornithology: A. Wetmore, E. A. Preble, W. L. McAtee, H. H. T. Jackson, E. A. Mearns, W. Palmer, and J. H. Riley (*The Wilson Bulletin* vol. 29, 1917).

I found no mention of the Audubon Society of the District of Columbia (1897–1959), which became the Audubon Naturalist Society. Virginia ornithologists, including John Aldrich, Paul Bartsch, and Philip DuMont, were prominent among the active members. The Society's journals, Wood Thrush (1946–1950) and Atlantic Naturalist (1950–1968), regularly reported bird observations from throughout the Commonwealth of Virginia as well as Christmas Bird Counts from the Washington suburbs and occasional research papers about Virginia birds.

Also missed by the author (not indexed under Virginia) were more than 80 years of bird observations compiled quarterly by some of Virginia's most active field observers for publication by National Audubon in *Bird-Lore, Audubon Magazine, Audubon Field Notes,* and *American Birds.* The compilers were H. C. Oberholser, 1917–1940; C. S. Brimley and J. H. Grey, 1941–1944; E. B. Chamberlain and C. S. Brimley, 1945–1947; J. J. Murray, 1948–1957; F. R. Scott, 1958–1980; H. T. Armistead, 1980–1993; E. A. T. Blom et al., 1993–1995; and M. J. Iliff, 1996–2000. Observations from Virginia's

Appalachians were compiled for the same journals by M. G. Brooks, 1948–1958; G. A. Hall, 1959–1998; and R. C. Leberman, 1999–2000.

This book will be nostalgic reading for the older generation. For me, it brought back pleasant memories of close to a hundred friends from yesteryear. Present Virginia Society of Ornithology members, however, should not expect to find the names of so many of their living friends.

The History of Ornithology in Virginia belongs in college libraries throughout the New World and in the personal collections of birders and naturalists in Virginia and surrounding states.—Chandler S. Robbins, U.S. Geological Survey Patuxent Wildlife Research Center, Laurel, Maryland 20708, USA. E-mail: chan\_robbins@usgs.gov